

-2.3 Review Worksheet

Directions: Solve the following equations. Show your work and check your answer. Remember, if you get stuck use your corresponding notes for each target sections.

TARGET 2A

1. $26 = 8 + v$

$$\begin{array}{r} -8 \quad -8 \\ 18 = v \end{array}$$

$v = 18$

2. $15 + b = 23$

$$\begin{array}{r} -15 \quad -15 \\ b = 8 \end{array}$$

$b = 8$

3. $m + 4 = -12$

$$\begin{array}{r} -4 \quad -4 \\ m = -16 \end{array}$$

$m = -16$

4. $m - 9 = -13$

$$\begin{array}{r} +9 \quad +9 \\ m = -4 \end{array}$$

$m = -4$

5. $-15 + n = -9$

$$\begin{array}{r} +15 \quad +15 \\ n = 6 \end{array}$$

$n = 6$

6. $x - 7 = 13$

$$\begin{array}{r} +7 \quad +7 \\ x = 20 \end{array}$$

$x = 20$

7. $14b = -56$

$$\begin{array}{r} 14 \quad 14 \\ b = -4 \end{array}$$

$b = -4$

8. $-104 = \frac{8x}{8}$

$$\begin{array}{r} 8 \quad 8 \\ 13 = x \end{array}$$

$x = 13$

9. $\left(\frac{m}{4}\right) = (-13) \cdot 4$

$m = -52$

$m = -52$

10. $\frac{-17x}{-17} = \frac{-204}{-17}$

$$\begin{array}{r} -17 \quad -17 \\ x = 12 \end{array}$$

$x = 12$

11. $\frac{12}{7} \left(\frac{7}{12} x \right) = \left(\frac{3}{14} \right) \left(\frac{12}{7} \right) x = \frac{18}{49}$

$$x = \frac{36}{98} = \frac{18}{49}$$

$x = \frac{18}{49}$

12. $-n + 8.5 = 14.2$

$$\begin{array}{r} -8.5 \quad -8.5 \\ -n = 5.7 \\ -1 \quad -1 \end{array}$$

$n = -5.7$

$n = -5.7$

13. $8p - 3 = 13$

$$\begin{array}{r} +3 \quad +3 \\ 8p = 16 \\ 8 \quad 8 \\ p = 2 \end{array}$$

$p = 2$

14. $9x - 7 = -7$

$$\begin{array}{r} +7 \quad +7 \\ 9x = 0 \\ 9 \quad 9 \end{array}$$

$x = 0$

$x = 0$

15. $-9x - 13 = -103$

$$\begin{array}{r} +13 \quad +13 \\ -9x = -90 \\ -9 \quad -9 \end{array}$$

$x = 10$

$x = 10$

16. $10 - 6v = -104$

$$\begin{array}{r} -10 \quad -10 \\ -6v = -114 \\ -6 \quad -6 \\ v = 19 \end{array}$$

$v = 19$

17. $-15 = -4m + 5$

$$\begin{array}{r} -5 \quad -5 \\ -20 = -4m \\ -4 \quad -4 \\ 5 = m \end{array}$$

$m = 5$

18. $-9x + 1 = -80$

$$\begin{array}{r} -1 \quad -1 \\ -9x = -81 \\ -9 \quad -9 \\ x = 9 \end{array}$$

$x = 9$

19. $\left(\frac{v+9}{3}\right)(8) = 3$

$$\begin{array}{r} v+9 = 24 \\ -9 \quad -9 \\ v = 15 \end{array}$$

$v = 15$

20. $\left(-1\right)\left(\frac{5+x}{6}\right)6 = -11$

$$\begin{array}{r} -6 = 5+x \\ -5 \quad -5 \\ -11 = x \end{array}$$

$x = -11$

21. $6 = \frac{a}{4} + 2$

$$\begin{array}{r} -2 \quad -2 \\ 4 = \frac{a}{4} \\ 4(4) = \left(\frac{a}{4}\right)4 \end{array}$$

$a = 16$

$16 = a$

TARGET 2B

22. $19 - h - h = -13$ $h=16$
 $19 - 2h = -13$
 $\begin{array}{r} 19 \\ -19 \\ \hline -2h = -32 \\ -2 \quad -2 \\ \hline h = 16 \end{array}$
23. $14 + 6a - 8 = 18$ $a=2$
 $6a + 6 = 18$
 $\begin{array}{r} 6a + 6 \\ -6 \quad -6 \\ \hline 6a = 12 \\ 6 \quad 6 \\ \hline a = 2 \end{array}$
24. $25 = 7 + 3k - 12$ $k=10$
 $25 = 3k - 5$
 $\begin{array}{r} 25 \\ +5 \\ \hline 30 = 3k \\ 3 \quad 3 \\ \hline 10 = k \end{array}$
25. $-8 = -(x+4)$ $x=4$
 $-8 = -x - 4$
 $\begin{array}{r} -8 \\ +4 \\ \hline -4 = -x \\ -1 \quad -1 \\ \hline 4 = x \end{array}$
26. $12 = -4(-6x-3)$ $x=0$
 $12 = 24x + 12$
 $\begin{array}{r} 12 \\ -12 \\ \hline 0 = 24x \\ 24 \quad 24 \\ \hline 0 = x \end{array}$
27. $-(7-4x) = 9$ $x=4$
 $-7 + 4x = 9$
 $\begin{array}{r} -7 + 4x \\ +7 \quad +7 \\ \hline 4x = 16 \\ 4 \quad 4 \\ \hline x = 4 \end{array}$
28. $-3 = 3(2t-1)$ $t=0$
 $-3 = 6t - 3$
 $\begin{array}{r} -3 \\ +3 \\ \hline 0 = 6t \\ 6 \quad 6 \\ \hline 0 = t \end{array}$
29. $x - 2(x+10) = 12$ $x=-32$
 $x - 2x - 20 = 12$
 $-x - 20 = 12$
 $\begin{array}{r} -x - 20 \\ +20 \quad +20 \\ \hline -x = 32 \\ -1 \quad -1 \\ \hline x = -32 \end{array}$
30. $-15 = 5(3q-10) - 5q$ $q=3.5$
 $-15 = 15q - 50 - 5q$
 $-15 = 10q - 50$
 $\begin{array}{r} -15 \\ +50 \\ \hline 35 = 10q \\ 10 \quad 10 \\ \hline 3.5 = q \end{array}$

TARGET 2A & 2B

Write an equation to model each situation. Then solve the equation.

31. General admission tickets to the fair cost \$3.50 per person. Ride passes cost an additional \$5.50 per person. Parking costs \$6 for the family. The total costs for ride passes and parking was \$51. How many people in the family attended the fair?
 $(3.50 + 5.50)x + 6 = 51$
 $9x + 6 = 51$
 $\begin{array}{r} 9x + 6 \\ -6 \quad -6 \\ \hline 9x = 45 \\ 9 \quad 9 \\ \hline x = 5 \text{ people} \end{array}$
32. Five times a number decreased by 18 minus 4 times the same number is -36. What is the number?
 $5x - 18 - 4x = -36$
 $x - 18 = -36$
 $\begin{array}{r} x - 18 \\ +18 \quad +18 \\ \hline x = -18 \end{array}$
33. Angela ate at the same restaurant four times. Each time she ordered a salad and left a \$5 tip. She spent a total of \$54. Write and solve an equation to find the cost of each salad.
 $4(x+5) = 54$
 $4x + 20 = 54$
 $\begin{array}{r} 4x + 20 \\ -20 \quad -20 \\ \hline 4x = 34 \\ 4 \quad 4 \\ \hline x = \$8.50 \text{ per salad} \end{array}$